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ABSTRACT

This report highlights the involvement of Illinois public community colleges in preparing individuals for employment, including instruction and services offered to students and businesses. After providing an overview of the state's community college system, the report describes the following components and aspects of employment preparation: (1) occupational programs and services, including information on available programs, statewide and regional programs, and advanced technology centers housing state-of-the-art equipment; (2) programs to meet the training needs of industry (manufacturing, communications, agricultural, mining, construction, wholesale and retail trade, finance, insurance, real estate, and service); (3) mechanisms to ensure quality, including program approval procedures, business and industry advisory committees, and program review and evaluation procedures; (4) adult basic and secondary education and remedial instruction; (5) partnerships with commerce and industry, including community college business centers, customized job training, entrepreneurship instruction and consulting services, industrial retention and attraction activities, contract procurement assistance, technology transfer, labor/management councils, and small business incubators; (6) cooperation with state agencies and statewide initiatives; (7) articulation with secondary schools and industry; and (8) funding and financial aid. The report concludes with a discussion of challenges facing the colleges in the future. (ALB)

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PREPARATION FOR EMPLOYMENT:

PROGRAMS AT ILLINOIS PUBLIC COMMUNITY COLLEGES

Illinois Community College Board
Springfield, Illinois

March 1989

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PREPARATION FOR EMPLOYMENT:

Programs at Illinois Public Community Colleges

INTRODUCTION

This report highlights the involvement of Illinois public community colleges in preparation for employment, including providing instruction and services to students as well as to businesses. The report provides an overview of the community college system and a description of its preparation for employment components which include the colleges':

.occupational programs and services
.adult education instruction
.partnerships with local commerce and industry
.cooperation with state agencies & initiatives
.articulation with secondary schools & universities
.funding

OVERVIEW

Comprehensive Programs and Services

Preparing individuals for employment is a basic mission of the Illinois public community college system, which consists of 50 colleges within 39 districts. This system of locally governed institutions located throughout the state is designed to provide access to postsecondary education opportunities within commuting distance of all residents of the state. These districts currently include 98 percent of the state's population and 93 percent of the territory in the state, and will comprise the entire state by 1990.

Each of the 50 colleges is comprehensive in that it provides extensive instructional and student support services to serve the needs of individuals as well as public services to address the needs of the community. Students, the general public, and businesses are served through instruction and services including:

- the first two years of baccalaureate education to prepare students to transfer to four-year colleges and universities, comprising 27 percent of community college students
- basic educational skills for adults who did not complete high school or who need remediation in order to seek employment or pursue further education, comprising over 20 percent of community college students
- occupational education from among 240 occupational specialties for employment training and retraining, comprising nearly 40 percent of community college students
- continuing postsecondary education through general studies certificates to enhance personal development, citizenship, and community development, comprising 13 percent of community college students
- comprehensive student support services, including counseling and assessment, job placement, tutoring, and skills centers to help students benefit from community college educational opportunities
- community and public service programs, which include non-credit courses; workshops, seminars, and forums; and cultural enrichment activities such as art fairs and theater productions
- business and economic development activities, including training and services to business and cooperation with local economic development organizations on commercial and industrial attraction and retention efforts

One Stop Shopping

Essentially, community colleges serve as "one-stop-shops" for education and employment training by providing assessment of basic educational and employment skills, educational and career counseling services, literacy training, adult basic education, occupational education, baccalaureate education, JTPA referrals, programs for targeted populations, and job placement services.

Governance

The Illinois public community college system is a decentralized system in that each community college is locally governed; each is led by its own administration and locally elected board of trustees subject to regulation and coordination of the Illinois Community College Board (ICCB). This results in the colleges being individually responsive to the needs of their local communities, businesses, and residents while also being responsive as a statewide system to state priorities and initiatives.

COMMUNITY COLLEGE OCCUPATIONAL PROGRAMS AND SERVICES

Available Programs

The 50 community colleges in Illinois provide a total of 3,630 associate degree and certificate programs within 240 discrete occupational specialties. These programs are vocational and/or technical in nature to provide job training, retraining, and/or upgrading of skills to meet current and emerging local, regional, and state manpower needs. The occupational programs and vocational skills courses serve a diverse population, i.e.:

- The median age of students enrolled in occupational programs, which lead to occupational certificates and/or degrees, is 27.7 years. The median age for persons taking vocational skills courses for upgrading and retraining is 33.2 years.
- Nineteen percent of the students in occupational programs and courses are minority students.
- Fifty-eight percent of the students in occupational programs and courses are female.

During fiscal year 1988, over 255,500 individuals (40 percent of community college enrollments) enrolled in occupational degree and certificate curricula and vocational skills courses. The greatest number of programs at both the degree and certificate level, which correspond to leading employment demands, are offered in:

- business and office occupations
- mechanics/repairers
- precision production technology
- engineering technology
- allied health and nursing

Enrollment is increasing in programs such as computer technology, office information systems, nuclear medicine technology, medical records technology, microelectronics technology, computer aided manufacturing, and robotics technology as employment opportunities increase. Over the past year, enrollments also increased in less technical yet equally critical programs such as medical secretarial, substance abuse counseling, food preparation, legal assisting, interpreter training, and child care.

Table I shows fiscal year 1988 figures on the number of occupational programs by broad areas, number of community colleges offering these programs, and number of students enrolled. This table illustrates that the public community college system is a major supplier of trained manpower in the state.

Table I

SUMMARY OF FISCAL YEAR 1988 OCCUPATIONAL/VOCATIONAL PROGRAMS
IN ILLINOIS PUBLIC COMMUNITY COLLEGES

Occupational Category	Discrete Programs	Number of Colleges	Total Programs	No. of Students
Agriculture	17	33	217	3,280
Business/office (includes programs in finance, accounting, banking, microcomputers, data and word processing, etc.)	50	50	1,226	78,062
Communications	7	11	26	877
Consumer Public Services (cosmetology, funeral services)	3	22	30	1,306
Engineering Technology (includes programs in robotics; CAM; laser/electro-optics; biomedical, mechanical, and computer electronics; telecommunications; computer numerical control; etc.)	26	50	309	17,749
Health (includes programs in nuclear medicine, radiography,nursing, dental assisting, physical & occupational therapy, sonography, radiation, etc.)	38	50	286	23,890
Home/Institutional Services	15	50	221	11,483
Law/Legal Assisting	1	3	4	477
Letters/Technical Writing	1	3	5	59
Library Assisting	1	8	15	198
Parks/Recreation Management	1	9	18	160
Physical Sciences/Science Technology (includes nuclear, chemical, and metallurgical programs)	3	10	14	222
Public and Protective Service	12	50	278	12,225
Trade and Industrial (includes construction trades, mechanics/repairers, and precision production including programs in electronics, microelectronics, digital electronics, horology, numerical control, etc.)	63	50	976	24,411
Performing Arts Technologies	2	3	5	20
Vocational Skills (General)	___	50	___	81,160
TOTAL	240	50	3,630	255,579

Most of these broad occupational areas shown in Table I include many discrete occupational programs, i.e.:

- Engineering Technology includes, for example, robotics, laser/electro-optics, computerized numerical control, computer aided design, biomedical electronics, computer electronics, telecommunications, and computer aided manufacturing.

- Trade/Industrial/Mechanics/Repairers includes, for example, apprenticeship programs and precision production programs, such as in micro and digital electronics and numerical control.

- Business/Office Occupations include programs in microcomputers, data and word processing, information management, and desktop publishing.

- Health includes programs in areas such as nursing, dental assisting, radiography, sonography, radiation, computerized tomography, and renal dialysis technology.

- Physical Sciences/Science Technology includes nuclear, chemical, and metallurgical technology programs.

Statewide and Regional Programs. In some occupational areas, there is a need for only one or a few programs within the state or within a region of the state. This is particularly true of many advanced technology programs in various specialized fields, which must be located near those industries that need those programs. To address this, the community college system contains specialized advanced technology programs at those colleges located near these industries. For example, robotics technology and computer aided manufacturing programs are located at community colleges near the manufacturing centers of the state.

In addition, the state is divided into eight planning regions to facilitate the planning of instructional programs and public services. The ICCB approves some programs as "statewide," which serve the labor market needs of the entire state, and some as "regional," which serve the labor market needs of the planning region. Currently, there are 39 regional programs in 17 occupational fields and 46 statewide programs in 26 occupational fields. Examples of statewide programs are microelectronics technology located near Illinois' major research university, telecommunications technology located in the Chicago metropolitan area, and coal mining technology located in the southern part of the state.

Advanced Technology Centers. While community college occupational programs have always been supported with laboratories and equipment, community colleges are increasingly equipping laboratories with state-of-the-art equipment and establishing advanced technology centers. For example, to name a few:

- The College of Lake County in Grayslake, Illinois, recently opened the Automated Industrial Center to house its automated manufacturing programs, featuring a completely integrated system of computer aided design, computer aided manufacturing, and robotics.

- Danville Area Community College in Danville has an information processing center, while Parkland College in Champaign recently opened its Microelectronics Center.

- Rock Valley College in Rockford recently opened an $8.75 million, 75,000 square-foot Rock Valley Technology Center, complete with a two-story 3,000 square-foot computer integrated manufacturing cell, designed and funded in partnership with an industrial council composed of 52 chief executive officers from Rockford area companies.

- Twenty-seven community colleges offer robotics training, and therefore have robotics equipment and/or labs; for example, Triton College, Illinois Valley Community College, Illinois Central College, College of DuPage, and others.

- Illinois Valley Community College in Oglesby is establishing a model factory on campus with a flexible manufacturing system (FMS), which will serve as a demonstration center for computer integrated manufacturing.

- Moraine Valley Community College in Palos Hills recently opened the Center for Contemporary Technology, a 120,000 square-foot, $14 million building housing an experimental laboratory, a computer center, a technical demonstration center, and testing, laboratory, and classroom space for various programs ranging from non-destructive testing to computer-aided design.

These advanced technology centers and labs are proving to be invaluable, not only in providing instruction on state-of-the-art equipment to students, but also in the area of technology transfer to assist businesses in incorporating new technologies and processes into their operations. For existing businesses to operate at their full productive and competitive capacity, they often need assistance to incorporate the latest in technologies and processes into their operations, such as more advanced equipment, new production techniques, statistical quality control procedures, just-in-time inventory methods, and appropriate employee training. Such assistance is increasingly available to businesses via these advanced technology centers as well as through community college business centers.

Meeting the Needs of Commerce and Industry

In educating and training students in occupational programs, the community colleges are not only serving the needs of individuals but also of commerce and industry. Through certificate and degree programs in 240 discrete occupational specialties, the community colleges serve major business and industrial sectors. A few are highlighted below.

- **Manufacturing Industry:** Illinois is one of the leading manufacturing states in the country. Community colleges are responsive to their local manufacturing sectors, providing training relevant to employers' needs. Whether training mechanics and repairers or workers skilled in design and precision production, community colleges can offer state-of-the-art instruction, such as in electronics, microelectronics, digital electronics, numerical control, robotics, computer aided design and manufacturing, plastics engineering, non-destructive evaluation and testing, and laser/electro-optics.

- **Communications Industry:** The telecommunications industry is virtually exploding with new technologies, and community colleges are responding with programs on the principles and techniques of telecommunciation electronic systems, including voice and data transmission circuits and systems via fiber-optics, antenna, and microwave satellite as well as digital switching systems and networking.

- **Agricultural Industry:** Agriculture represents an integral part of the Illinois economy. The need for training and upgrading of skills on new technologies and methodologies in farming and agribusiness and services remains high. Job opportunities in horticulture are expanding. Community colleges are responding by offering needed courses and programs easily accessible at the local level.

- **Mining Industry:** Illinois has a vast supply of coal and other important minerals. As a result, the mining industry has been a significant factor in the state's economy for many years. The community college system has responded to the needs of this industry by providing not only the initial training but also the upgrading and retraining required by the industry to help assure that the safety and productivity of miners remains high.

- **Construction Industry:** The construction industry in Illinois is expected to experience a faster than average growth through 1995. In addition to new positions, many job openings will be created due to people leaving the workforce. Community colleges offer training in all of the construction trades occupations. Several community colleges provide the related classroom training to construction apprentices. A large number of programs are available in building and plant maintenance to provide multiple skills in several of the construction areas.

- **Wholesale and Retail Trade:** Approximately 23 percent of Illinois' workers are employed in wholesale and retail trade industries. Community colleges offer programs to prepare people for occupations in all facets of this expanding industry. From office workers needing office information systems skills to sales and marketing staffs to management staff to small business entrepreneurs who need some of each of these skills, the industry relies heavily on the community colleges to supply its workforce.

- **Finance, Insurance, and Real Estate:** Illinois has traditionally been a national center in finance, insurance, and real estate. Employment projections for these industries indicate this

tradition will continue with an average of nearly 5,200 new jobs being created per year. Once again, community colleges play a vital role in providing trained personnel for these key segments of our economy. From office support staff to management, former community college students are helping to keep these industries strong and vital.

. **Service Industries:** Between 1984 and 1995, employment in the services industry in Illinois is expected to grow by approximately 18 percent. By 1995, nearly 1.7 million wage and salary workers will be employed in this sector. In addition, a large share of the 335,000 self-employed and unpaid family workers will be working in service occupations. Community colleges have and will continue to play a critical role in providing entry-level training as well as upgrading and retraining to this increasingly important sector of our economy. A few of the service industries served are highlighted below:

- **Automotive Services:** Community college automotive programs are far more than amateur-level "fix it" courses. The needs of new engine design are being met via trained mechanics who become skilled in specialized areas of electronics, advanced engine diagnosis, and tune-up for all major manufacturers. Modern procedures and techniques in electronic laboratory settings offer the latest testing devices and cutaway models of all major makes of automobiles. One- and two-year certificate programs are available in specialty areas that range from chassis repair and power plant overhaul to rebuilding and advanced engine diagnosis.

- **Health Care Services/Medical Technology:** Fully approved and accredited by cognizant state agencies and national accrediting associations in patient care, health maintenance, and contemporary specialties, community colleges provide extensive training for medical technicians, nurses, and other health specialists. Many specialties are emphasized including electrocardiology, nuclear medicine technology, surgical technology, radiological technology, phlebotomy, respiratory care, and opthalmic technology, to name a few. Hospitals and other health care facilities as well as modern college laboratories serve as clinical training facilities.

- **Tourism Industry:** Tourism is an emerging sector in Illinois' economy, whether promoting tourism within the state or responding to the needs of Illinois residents to travel out of the state. Community colleges are keeping abreast of the increasing travel trade with programs in travel and tourism, hotel-motel management, food services and culinary arts, and recreation facility management as well as through direct assistance in promoting tourism within their regions.

- **Business and Office Services:** From such business basics as accounting and office management to computerized office procedures through data processing, word processing, and office information systems, community colleges provide instruction in the full spectrum of business operations for managers, office personnel, and equipment technicians. Community colleges are prepared to meet the employment demands of this fastest growing area in the service sector.

- **Social Services:** Employment in social services is slated to grow by more than 34 percent by 1995. The recent expansion of community college programs in areas such as child care and residential care demonstrates the colleges' abilities to respond rapidly to their local industry needs.

Assuring Quality Programs

Program Approval Procedures. Community college occupational programs are designed to meet the labor market needs of each district and the state as a whole. All programs offered within the community college system must be approved by the Illinois Community College Board and the Illinois Board of Higher Education. To qualify for federal vocational education funding, these programs must also be approved by the Illinois State Board of Education, the administering agency for the federal Carl Perkins Vocational Education Act in Illinois. This approval process ensures that each program is justified on the basis of need, quality, and cost. Program approval criteria are designed to ensure that graduates of each program are needed by commerce and industry, that the program adequately provides students with appropriate employment skills

needed by industry, that adequate resources are provided by the college to operate a quality program, and that the program is cost effective. In addition to meeting standards of the state's three education boards, some occupational programs must also meet federal, national, and/or state accreditation or licensing requirements handled by other state agencies. Consequently, many state agencies participate in the approval of curriculum for these occupations. During the last two years, over 200 new programs have been added, including microelectronics technology, computerized tomography, digital/microprocessing technology, software technology, computer aided design, and computer aided manufacturing.

Business and Industry Advisory Committees. Community college occupational programs must be responsive to changes in the labor market as well as to changes in the skills required for each occupation. To ensure that each occupational program keeps up with the changing needs of commerce and industry, advisory committees consisting of individuals from local businesses and industries oversee programs from which they employ graduates. These advisory committees assist college personnel on a continual basis in making decisions about curriculum changes, equipment upgrading, modification of facilities, selection of teaching materials, and other program needs.

Program Review and Evaluation Procedures. Five years ago, the ICCB implemented a statewide program review process that requires all community colleges to review all of their curricula and services over a five-year period. The purpose of the program review procedures is to complement the program approval procedures -- while the approval procedures ensure that all new curricula meet standards of need, quality, and cost, the review procedures ensure that curricula continue to meet these standards.

The first five-year cycle of this review process was just completed. During this period, the colleges collectively reviewed over 7,400 discrete degree and certificate programs and baccalaureate/transfer discipline areas as well as nearly 600 instructional support programs. The vast majority of the programs were continued with improvements to the existing programs. A total of 279 degree and certificate programs were identified for discontinuance or phase-out, 100 of which have already been withdrawn. Many programs underwent major modifications, such as curricular changes or limits set on enrollments due to the labor market.

Results

Occupational programs also show excellent results. A follow-up study of fiscal year 1985 graduates of community college occupational programs, conducted one year after graduation, revealed that 79 percent of the graduates who were available for the labor force were employed and 17 percent were continuing their education, yielding a 96 percent "success rate." The average salary for those employed full-time was $8.14 per hour.

ADULT EDUCATION

Community colleges find many of their enrollees, whether they are students entering college directly from high school, older adults returning for retraining or upgrading, or high school dropouts to be in need of basic skills training in order to effectively participate in occupational training or pursue further education. To meet the needs of these individuals, adult and remedial education programs are offered at all public community colleges to provide instruction in:

- **Adult Basic Education,** designed to bring non-high school graduates to a competency of eighth-grade equivalency. The community college system's adult basic education curriculum consists of 166 one-credit and half-credit modules in reading, communications (oral and written), arithmetic, career/job preparation, and life skills. Community colleges offer many basic skills courses for individuals for whom English is their second language.

- **Adult Secondary Education,** designed to bring non-high school graduates to a competency of twelfth-grade equivalency. This curriculum

consists of 127 one-credit and half-credit modules in GED test review, English (language and writing), mathematics, science, social studies, career/job preparation, life skills, and citizenship. Most individuals do not need the entire 127 modules, but rather take modules as needed to meet their goals. For example, some individuals focus on modules that lead to obtaining the GED. Others find the life skills modules, which provide instruction in reading, writing, and mathematics within real-life context situations, more appropriate.

- **Remedial Education,** designed to remedy basic skills deficiencies of high school graduates in reading, writing, speaking, and arithmetic.

Such educational services are increasingly important in training persons for entry or re-entry into the labor force or to increase workplace literacy. In fiscal year 1988, over 132,184 persons were enrolled in adult and remedial education programs at Illinois community colleges, as shown in Table 2. This represents nearly 21 percent of community college enrollments and approximately 80 percent of all adult education enrollments at public secondary and postsecondary schools.

Table 2

FISCAL YEAR 1988
REMEDIAL, ADULT BASIC, AND ADULT SECONDARY ENROLLMENTS

Remedial Education	9,304
Adult Basic Education	99,559
Adult Secondary Education	23,320
TOTAL	132,183

The figure for remedial education enrollments does not include individuals that may be enrolled in degree or certificate programs, but who are obtaining remediation in one or a few areas. In fiscal year 1988, nearly 227,000 credit hours were generated in remedial courses.

PARTNERSHIPS WITH COMMERCE AND INDUSTRY

To meet their preparation for employment mission, community colleges work closely with commerce and industry in order to provide training and services directly to business as well as to ensure that instruction provided for students is relevant to employer needs.

Community College Business Centers -- a National Award-Winning Statewide Effort

The focus of community college partnerships with commerce and industry is a network of business centers located at every community college district, designed to provide training and services to business. While occupational and developmental/remedial instruction assist people in entering, re-entering, or remaining in the labor force, business centers focus on assistance to business to promote business and economic development and ensure adequate job opportunities for Illinoisans.

The primary functions of business centers are to provide customized job training for local commerce and industry, entrepreneurship training and consulting services for potential or existing small businesses, and assistance with attracting and retaining commerce and industry:

- **Customized job training,** tailored to meet a company's specific training needs, is provided under contract to train new employees, keep existing employees up-to-date, and upgrade employee skills. The instructors may be college faculty or persons hired specifically for the training program who have the appropriate expertise. Over 1,400 companies and 28,000 employees were served through customized job training in fiscal year 1988.

- **Entrepreneurship instruction and consulting services,** including courses, workshops, and management assistance, are provided to help people start or operate small businesses. In fiscal year 1988, community colleges assisted over 30,000 potential and existing entrepreneurs.

- **Industrial retention and attraction activities** are conducted in conjunction with other state and local economic development entities in recognition of the important role that customized job training and entrepreneurship services play in this regard. In fiscal year 1988, community colleges assisted with the attraction, retention, or expansion of over 250 companies, helping create and retain over 10,000 jobs.

- **Contract procurement assistance** is provided to help businesses compete for government contracts. In fiscal year 1988, assistance was provided to 2,500 businesses, yielding $35 million in contracts.

Community colleges are frequently involved with other innovative efforts as well, such as:

- **Technology transfer** to assist businesses in incorporating new technologies and process into their operations to increase productivity and competitiveness

- **Labor/management councils** to help improve local relations between labor and management and thus improve the local business climate

- **Small business incubators** to help nurture new small businesses

- **Advanced technology centers** to train students on state-of-the-art technology as well as to provide the use of the equipment to business and assist with the transfer of technology to direct application in business

Community college partnerships with commerce and industry also serve to ensure that instruction for students is relevant to employer needs. In this regard, community colleges obtain input on all occupational programs through local program advisory committees, which include representatives from appropriate local businesses. Also, partnerships with commerce and industry provide students with opportunities within local firms for cooperative education, internships, and on-the-job training.

In April 1988, Illinois was presented with the Keeping America Working State/Employer/Labor Partnership Award by the Keeping America Working Task Force of the American Association of Community and Junior Colleges and the Association of Community College Trustees, in recognition of this highly successful statewide effort.

COOPERATION WITH STATE AGENCIES AND INITIATIVES

The public community college system, because it is locally governed within a statewide coordinated system, is ideally suited to be responsive to state level priorities. This results in community college participation throughout the state in numerous state agency programs or statewide initiatives.

State Agency Programs

The ICCB and community colleges coordinate efforts with numerous state agencies in order to participate in or deliver their programs. A number of these agencies and their programs are highlighted below.

Illinois State Board of Education, Department of Adult, Vocational and Technical Education. The ISBE administers a number of programs in which Illinois community colleges participate or serve as a key delivery agent, for example:

- **Carl Perkins Vocational Education Act:** This Act provides federal funding, which, in conjunction with state and local funding, assists community colleges to offer occupational programs. This program also funds special initiatives, including Building Fairness to help eliminate sex bias and stereotyping in vocational education, and Building Opportunity to meet the vocational education and child care needs of single parents and displaced homemakers.

- **Adult Education Act:** Community colleges are the major provider of adult education under these funds, and serve approximately 80 percent of the individuals receiving adult education in the state.

- **High Impact Training Services (HITS):** Community colleges are key training providers under this program, funded with both state and federal funds, and receive approximately 95 percent of HITS funding to train new employees of companies locating or expanding in the state.

- **Vocational Instructor Practicum (VIP):** VIP provides state funds to help keep the skills of vocational instructors up-to-date and relevant to the marketplace.

Department of Commerce and Community Affairs Programs. Community colleges are recognized as key training and economic development partners by the Illinois Department of Commerce and Community Affairs (DCCA), as evidenced by their active participation in various DCCA programs. These include the following:

- **Job Training Partnership Act (JTPA):** Community colleges are primary providers of training under federal JTPA funds to help persons obtain skills for employment. All 39 community college districts are involved in JTPA programs with their local service delivery areas (SDAs), which administer local JTPA programs. Of the 26 SDAs, three are administered by community colleges. The ICCB administers a portion of the JTPA 8 Percent Set-Aside for State Education Coordination and Grants.

- **Dislocated Worker Program:** Under Title III of JTPA, community colleges operated 14 of the state's 19 dislocated worker centers in fiscal year 1989 to provide job training and placement services to persons who have lost their jobs and who cannot expect to return to their previous occupation due to plant closings, mass layoffs, and changes in technology.

- **Small Business Development Center Program:** Half of the community colleges participate in the SBDC program, which is funded through a combination of state and federal funds, to provide management assistance and counseling to small business owners and operators.

- **Technology Commercialization Grants:** Many community colleges participate in the state-funded technology commercialization program in cooperation with federal laboratories and universities, to assist in technology transfer from research to business applications to help businesses in applying newly developed technologies in their operations.

- **Displaced Homemaker Program:** Displaced homemakers are persons who have worked in the home for a substantial time and, due to the loss of the main income source through the death of a spouse or dissolution of marriage, must secure work outside the home. Many community colleges participate in this program to provide counseling, training, and job placement to help displaced homemakers enter the labor market.

- **Industrial Training Program:** Community colleges regularly assist businesses in seeking state funding available through this program and in providing training for employees to assist in attracting new industry to the state as well as in expanding existing industries.

Other State Agency Programs: Community colleges also participate in other state agency programs, such as:

- **Prairie State 2000 Authority:** Individual Training Assistance Program to train or retrain individuals and the Employer Training Assistance Program to train or retrain company employees
- **Illinois Department of Public Aid:** Education and training programs to train public aid recipients for employment
- **Illinois Department on Aging:** "Train-the-trainer" programs to prepare community college faculty to teach home-care aides how to care for Alzheimers patients
- **Secretary of State:** Literacy programs to assist the 1.2 million persons in Illinois who are functionally illiterate to learn to read and, hence, become more employable
- **Illinois Department of Rehabilitation Services:** Education and training programs for special needs/handicapped individuals

U.S. Army and Illinois National Guard

The ICCB and community colleges entered into joint agreements with the U.S. Army and the Illinois National Guard to enable military personnel to take advantage of the vast resources of the community college system, in response to the army's initiative to involve 90 percent of the active force by 1990 in continuing their education. One agreement established the Illinois National Guard GED Program, in which community colleges provide special preparatory and testing programs for Guard personnel without a high school diploma who need a GED. The second agreement established the Military Continuing Education Program to provide uniform baccalaureate transfer degrees, regular programs, credit for prior learning, flexible residency requirements, and courses at Army and National Guard sites to meet the unique needs of military personnel.

Occupational/Labor Market Information

In addition to working with various state agencies to deliver employment training programs, the ICCB works with the ten other member agencies of the Illinois Occupational Information Coordinating Committee (IOICC), which serves to coordinate the collection and dissemination of occupational data. ICCB participation enables it to provide local institutions with comprehensive occupational and career information and computerized supply/demand data to improve planning, implementation, and evaluation of training programs and to improve career planning and guidance for students. The ICCB regularly cooperates with IOICC to conduct workshops to train people on the use of occupational and career information.

ARTICULATION WITH SECONDARY SCHOOLS AND UNIVERSITIES

While the community college system is an integral part of the state's efforts to prepare people for employment, it is but one step on the ladder between secondary education and employment or further higher education. Consequently, community colleges coordinate their efforts with high schools as well as four-year colleges and universities.

Coordination with High Schools

Community college occupational programs increasingly are articulated with high school programs because it is important that:

- students have adequate skills upon leaving high school to enter college occupational programs, particularly in the more technical programs
- instruction for the students is not duplicated at each level
- specialized instructional equipment and facilities are shared when possible to make the most of equipment budgets in light of the continuous demand for the purchase of advanced technology equipment to keep pace with changing technologies

To address these concerns, the Illinois State Board of Education's Education for Employment policy requires community colleges and high schools to cooperatively develop articulation agreements. The articulation efforts focus heavily on improving the preparation of high school students for occupational/technical programs at community colleges and ensuring a good alignment between the course work at both the high school and community college levels.

The articulation committees consisting of both high school and community college personnel are studying new curriculum ideas such as the tech prep curriculum, a technical preparatory curriculum designed to better prepare those high school students planning to pursue a technical program at the community college. The tech prep curriculum includes subjects such as applied mathematics, applied physics, and principles of technology. One method of achieving better program alignment that is being studied is a four-year structured program consisting of the last two years of high school and two years of community college instruction. Such arrangements, commonly called "2+2" programs, enable students to achieve a high level of technical skills in a relatively short period of time.

Coordination with Universities

Community colleges increasingly are undertaking cooperative efforts with universities in technology commercialization programs to apply research findings to direct application in commerce and industry. Universities, which have the research capabilities necessary to develop new technologies, and community colleges, which have the occupational programs needed to train the technicians who will work with the new technologies, find that cooperative efforts are ideally suited to assist commerce and industry in Illinois in adapting new technologies to their operations.

Although community college occupational programs are designed primarily to meet the employment needs of business and industry, many of these programs are closely related to university programs. Hence, it is possible for students to get credit for some of their occupational courses if they decide to pursue a degree in a related field at a university, making it important for community colleges to articulate occupational programs with area universities. Many universities have designed "capstone" programs that enable students to obtain a baccalaureate degree by using the technical education as a base.

FUNDING

The community college system is funded through a combination of state and federal funds, local property taxes, tuition, and other funds. Community college occupational programs also are partially funded through the Carl Perkins Vocational Education Act, administered by the Illinois State Board of Education (ISBE). Funds from this source are a combination of state and federal funds. During fiscal year 1988, the public community colleges expended $174.5 million for occupational programs and services. A summary of these expenditures by source is in Table 3.

Table 3

FISCAL YEAR 1988
OCCUPATIONAL EDUCATION FUNDING ESTIMATES BY SOURCE

ICCB Grants (state funds)	$ 54,988,307	32%
ISBE Grants (state & federal vocational education funds)	$ 19,448,900	11%
Local Funds (tuition, property taxes, & other)	$100,102,026	57%
TOTAL	$174,539,233	100%

During this same time period, community colleges expended $74,456,065 for adult education, which includes adult basic education, general educational development, adult secondary education, and English as a Second Language. A summary of these expenditures by source is in Table 4.

Table 4

FISCAL YEAR 1988
ADULT EDUCATION FUNDING ESTIMATES BY SOURCE

ICCB Grants (state funds)	$19,914,872	27%
ISBE Grants (state & federal funds)	$ 7,808,719	10%
Local Funds (tuition, property taxes, & other)	$46,732,474	63%
TOTAL	$74,456,065	100%

The funds shown in Table 3 and Table 4 include a portion of several grants which provide funding to community colleges for specified purposes. For example, the colleges received a total of $7.9 million in ICCB Disadvantaged Student Grants and $2.4 million in Special Needs Vocational Education Grants to provide special services to disadvantaged and disabled students. These grants provide services such as tutoring, special counseling, and individualized remediation of basic educational skills for students needing such assistance.

Special grants also are provided to community colleges to assist them with purchasing and upgrading instructional equipment. During fiscal year 1988, the community colleges received $1.3 million in ICCB Advanced Technology Equipment Grants and $1.6 million in ISBE Vocational Education Equipment Grants. Together, these funds and local college funds help provide state-of-the-art equipment for the many occupational/technical programs offered by community colleges.

Special grants also are provided to community colleges to assist in operating business centers/economic development offices to provide training and services to commerce and industry. In fiscal year 1988, community colleges received $2.9 million in Economic Development Grants. These grants ensure that every community college district has a business center/economic development office with a reasonable operating budget. This funding is supplemented with local college funds, special state and federal competitive grants, and revenues from services to local commerce and industry. During fiscal year 1988, these other sources totalled nearly $24 million.

The data in these tables show that a great amount of local support for employment training programs is being provided by student tuition and local property taxes. In addition, a significant amount of funds is being directed for program improvement and instructional equipment. These funds are essential to keep the employment training programs up-to-date to meet the manpower needs of current and emerging occupations in Illinois commerce and industry.

Financial Aid

In fiscal year 1987, 119,123 community college students received a total of $116.7 million in financial aid averaging nearly $1,000 per recipient to assist in covering education expenses. This includes 118,268 students who received $73 million in Pell Grants, Supplemental Educational Opportunity Grants, and Monetary

Award Program Grants; 16,329 students who received $29 million in student loans; and 10,666 students who received $14.5 million through college employment or work-study programs. In addition, many students receive financial aid through a variety of other state and federal sources, including JTPA and public assistance training funds. Many occupational and adult education students are eligible for and receive a portion of this financial aid.

CONCLUSIONS

Community colleges in Illinois have demonstrated their effectiveness in training persons for employment through occupational programs and services, partnerships with local commerce and industry, cooperative efforts with state programs, and articulation with secondary schools and universities.

Community colleges are valuable resources for the State of Illinois which increase in value with increased use. Community colleges serve as effective "one-stop-shops" for employment training by providing:

- assessment of basic educational/employment skills
- educational and career counseling services
- literacy training
- adult basic education
- occupational education
- baccalaureate education
- JTPA referrals
- job placement services

While the community college system has responded effectively to numerous challenges over the years, many challenges lay ahead:

- The constant change required to keep occupational programs up-to-date logically poses a continuous challenge, particularly in light of rapidly changing technology.
- Increased efforts to retrain and upgrade the workforce are necessitated not only by changing technology, but also by the changing world economy.
- Businesses' increasing need for assistance in incorporating the latest in technologies and processes into their operations (technology transfer and technology application assistance) must be met to assist them in being competitive and productive.
- Remedial and adult basic education and workplace literacy instruction are increasingly needed as part of the effort to retrain and upgrade the workforce.
- Articulation with high schools takes on increasing importance as technical occupational programs at community colleges demand better preparation from entering students.
- Changing demographics also pose new challenges as enrollments increasingly reflect growing proportions of minorities in our population and in our schools.

By maintaining a responsive and effective system, these challenges will be met and the community colleges of Illinois will continue to provide the residents of the state with quality education designed for employment in jobs needed by the state's commerce and industry.

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